

1 understand the difference between this  
2 architecture, and could it be used in that  
3 fashion.

4 My question was towards technical  
5 feasibility.

6 MR. SRINIVASA: Apparently at the  
7 ONU side it's not -- you know, the voice portion  
8 is frequency division multiplexed. They are on  
9 the same pair. And apparently both are  
10 combined. The DSL portion is still packet,  
11 whereas the voice portion is in a D4,  
12 conventional digital framing and formatting.

13 They are all multiplexed and put on the  
14 same fiber. It goes back to a BDT, and then  
15 back to the central office, and then it goes to  
16 the ATM. Again, they separate them out. The  
17 voice goes to the voice switch and the ATM, you  
18 know, packets --

19 MS. CARTER: So that couldn't be  
20 purchased -- I mean, my understanding of the  
21 answer was you can unbundle at the ONU.

22 MR. SRINIVASA: You have an option  
23 of installing your own DSLAM at the ONU. What  
24 is unbundled at that point is the drop cable.

25 MS. CARTER: But if I didn't want

1 to do that and I wanted to use their capability,  
2 is my question.

3 MR. SRINIVASA: So then you have  
4 two -- you have to define the ONU all the way up  
5 to the ATM. It could be your own ATM switch.  
6 Instead of routing it to the ASI ATM switch,  
7 they can route it to your ATM switch. After  
8 that point, that will be one UNE. Is that what  
9 you're saying?

10 Let me ask -- somebody else may be able  
11 to give me the answer.

12 MS. BOURIANOFF: Judge Srinivasa,  
13 I don't want to directly answer that question  
14 that you were posing to Covad, but I did want to  
15 get to another aspect, and this is to clarify  
16 something we heard at the last workshop.

17 I think it was clarified and retracted  
18 in an ex parte that Southwestern Bell filed at  
19 the FCC. But, you know, Covad started asking  
20 about UNE platform.

21 And at the last workshop, we heard the  
22 Richardson fiber to the curb area, a voice CLEC  
23 couldn't send UNE-P orders in this Richardson  
24 fiber to the curb area.

25 I think that that was clarified in

1 filings at the FCC and said that that was  
2 incorrect, that a voice CLEC was able to send  
3 UNE-P orders and serve voice end-user customers  
4 over a UNE-P arrangement.

5 But I would like to clarify that for  
6 the purposes of this workshop, because there has  
7 been some confusion talking about UNE platforms.

8 MS. LEAHY: This is Tim Leahy,  
9 with Southwestern Bell. I'm not sure that these  
10 witnesses can answer that. I haven't looked at  
11 that letter in a while, but my understanding is  
12 that letter is valid today or is as accurate  
13 today as it was when it was sent.

14 So we haven't changed that. So to the  
15 extent that that clarifies statements made in a  
16 prior workshop, it was meant to so clarify.

17 MS. BOURIANOFF: And I just wanted  
18 to clarify that when Covad was talking about UNE  
19 platform, I don't think they are talking  
20 about --

21 MS. CARTER: We're not talking  
22 about voice.

23 MS. BOURIANOFF: Right. But  
24 Southwestern Bell is somehow allowing CLECs,  
25 like AT&T, to, in some manner, provide voice

1 over -- you know, it's not the typical loop  
2 transport switch combination we think of, but  
3 some combination of elements.

4 MR. SRINIVASA: So did you state  
5 that they filed something at the FCC, that under  
6 the Richardson configuration that if AT&T or  
7 somebody wants to provide voice as a UNE  
8 platform they can?

9 MS. BOURIANOFF: Yes.

10 MR. SRINIVASA: So the rate you  
11 would pay is the -- whatever you pay for the  
12 copper and another combination?

13 MS. BOURIANOFF: That's correct.  
14 That's my understanding. I've not looked at the  
15 letter in a while, but that was my understanding  
16 of the clarification at the FCC.

17 That's my understanding also of what  
18 we've actually experienced in practice. I  
19 believe we've been able to send UNE-P voice  
20 orders in that area and we paid the typical  
21 UNE-P rates established by the Commission.

22 MR. SRINIVASA: So yours is UNE  
23 combination. This is a special service that is  
24 a combination of UNE. That's UNE-C.

25 MS. CARTER: Yeah, or data UNE-P,

1 if you want to...

2 MR. CHIAPPETTA: This is Robert  
3 Chiappetta, from the Office of Policy  
4 Development. I just had a question for the  
5 representative from Richardson here.

6 When these new subdivisions are being  
7 developed -- and I assume that Richardson is  
8 booming just like the rest of Texas -- when  
9 these subdivision developers and real estate  
10 people are advertising for these new  
11 subdivisions, what type of communication  
12 services are they telling these new potential  
13 residents that they can receive, and how is the  
14 City of Richardson expressing to these new  
15 potential citizens of Richardson, Texas.

16 MR. DAVIS: I think, in general,  
17 realtors obviously are making their potential  
18 customers aware of not only the availability of  
19 POTS service in a more traditional  
20 telecommunications medium but they are certainly  
21 discussing the availability of cable modems like  
22 that offered by AT&T and also DSL services as  
23 they were prior to the moratorium offered by  
24 Southwestern Bell.

25 I think the issue is probably more

1   pertinent in an economic development forum in  
2   that the fiber optic network that was  
3   constructed by Southwestern Bell is a strong  
4   selling point for economic development in the  
5   City of Richardson and is an important one that  
6   we wish to preserve.

7               Does that answer your question?

8               MR. CHIAPPETTA:  I guess my  
9   question now is, how is that fiber backbone that  
10  is being developed, how are you referring to  
11  that since it really can only be used at the  
12  moment for POTS and in limited -- or I guess  
13  from the carryover of these 900 DSL subscribers?

14              I assume also Richardson is mainly a  
15  residential area.  I don't know how much  
16  commercial --

17              MR. DAVIS:  We categorize  
18  Richardson as primarily a residential area.  
19  Actually we would -- we're a net importer of  
20  jobs in the City of Richardson.  We're probably  
21  better known in the State of Texas as the  
22  telecom corridor of Nortel Communications,  
23  Ericsson Communications, MCI.

24              We have corporate headquarters and  
25  campuses in Richardson that are immense.

1                   MR. CHIAPPETTA: And I assume that  
2 most of these corporations are not being served  
3 by this fiber system that we're discussing  
4 today.

5                   MR. DAVIS: I'm not sure I could  
6 answer that question for you. Maybe you can  
7 direct it to Southwestern Bell.

8                   MR. SANDS: Bob Sands,  
9 Southwestern Bell. The Richardson fiber to the  
10 curb is only for the residential customers in  
11 Richardson.

12                  There are some adjacent, small  
13 businesses, like strip shopping centers and  
14 things like that, but all of those other  
15 locations are served by other fiber technologies  
16 or copper technology.

17                  MR. DAVIS: There are a rather  
18 large number of fiber providers in Richardson as  
19 well. So most of our employers or businesses in  
20 town find fiber optics readily available in  
21 general.

22                  I would say that the point you make is  
23 a valid one, in that I'm not sure that getting  
24 into the specifics of what the network does is  
25 ever discussed in the context of selling real

1 estate or whether it's to residents or to  
2 businesses, but certainly the concept of a fiber  
3 optic network is and is used often.

4 I think there's an important point  
5 there that relates back to my earlier comment,  
6 that the fiber optic network itself is really  
7 more important than today's electronic tackle  
8 that's attached to the fiber optic network,  
9 because whether the Pronto system lasts two  
10 years, five years or 10 years, the fiber optic  
11 will still be usable and viable in 30 years.

12 I doubt seriously that today's  
13 technology is going to be in use 30 years from  
14 today regardless of what it is. So decisions  
15 that are made with regard to the unique case  
16 that exists in Richardson, you certainly need to  
17 keep that in mind.

18 It's ridiculous to make a decision for  
19 today's dollar that denies us tomorrow's  
20 opportunity. Certainly backtracking and laying  
21 copper cable to replace fiber optic cable that  
22 is already in the ground just defies common  
23 sense and rational thought.

24 MR. DRAKE: I would like to  
25 comment to the gentleman. Laying new copper to



1 replace fiber, I do understand. It would be  
2 stupid to do. But there are new technologies  
3 out today that are being deployed by U.S. West  
4 that if they already have fiber out into the  
5 neighborhoods as they are stating that they can  
6 utilize that will support unbundling.

7           We have that in our lab, and I extend  
8 you an invitation to come to our lab in  
9 Richardson and we will demonstrate this whole  
10 thing for you.

11           MR. DAVIS: Using copper  
12 technology?

13           MR. DRAKE: No. It's using fiber  
14 to the curb, just like you want to see there.  
15 It is not copper technology, but it supports  
16 unbundling and it supports all flavors of DSL  
17 plus T1, everything you need, ISDN, all the  
18 flavors that are out there.

19           They could take that from their CO on  
20 their existing fiber out to the neighborhoods,  
21 and from there they would have to install a type  
22 of IDLC device.

23           And then if they are going to bury  
24 fiber on into the neighborhoods, they could use  
25 this device, and it does support all the new

1 technologies, unbundling, everything.

2 MR. SRINIVASA: Who's the vendor?

3 MR. DRAKE: One of them is --

4 MR. MILLER: Next Level.

5 MR. DRAKE: -- Next Level

6 Communications.

7 MR. SRINIVASA: Can you identify  
8 yourself for --

9 MR. MILLER: WorldCom, John  
10 Miller. Next Level Communications.

11 MR. DRAKE: We have that in our  
12 lab today. And U.S. West is deploying that  
13 today in Arizona with fiber to the house, and  
14 they are doing video, data, voice, everything  
15 over it.

16 MR. DAVIS: I would point out  
17 again that the terminal tackle that are attached  
18 to these transmission lines are really very  
19 tenuous, and certainly there are a considerable  
20 number of solutions that are available today.

21 I have no doubt whatever that Next  
22 Level or Lucent or CISCO or any of the other  
23 major electronics providers could provide an  
24 end-to-end solution that certainly would allow  
25 the unbundling of network elements in this in

1 such a way that Covad or IP could turn around  
2 and sell DSL service.

3           But I think rationally you have to  
4 recognize that Southwestern Bell invested a  
5 considerably large amount of money in the  
6 Richardson project not more than six years ago.  
7 I think nearly everybody is entitled to have  
8 some sort of a reasonable return on their  
9 investment before they are required to scrap  
10 that investment and replace it with something  
11 completely different.

12           I'm not sure that I would venture any  
13 farther into the subject than that. I  
14 understand that the issue is -- and this is  
15 something near and dear to us, because you know  
16 we're having to explain to our citizens now why  
17 DSL service that was available a month ago is  
18 not available today.

19           This is certainly a sensitive issue in  
20 Richardson right now. I think reasonably it's  
21 not reasonable to expect them to replace  
22 everything from the switch level down to the ONU  
23 in Richardson in order to accommodate a really  
24 narrow segment of the market.

25           In sitting here and listening to some

1 of the discussion that's taken place today, I'm  
2 frankly a little (inaudible) at some of the  
3 opportunities that I've heard thrown out. First  
4 we hear all new subdivisions should have copper  
5 wiring thrown in.

6           Then I've heard comments that sort of  
7 alluded to the fact that we ought to place some  
8 sort of a moratorium on laying or connecting new  
9 customers to an existing fiber network in these  
10 new subdivisions. The question that didn't get  
11 asked at the time is, "What will the new  
12 customers do if we don't do that"?

13           I assume they are going to want  
14 telephone service when they move into their  
15 homes. I'm a little confused at some point what  
16 the final purpose of this is. I understand that  
17 the larger picture is to provide unbundled  
18 services, and I certainly support the  
19 competitive aspects of that.

20           We are talking about an exception to  
21 the general rule here, and I think that that  
22 exception requires a more detailed evaluation of  
23 what is actually possible to accomplish within  
24 reasonable grounds of Richardson.

25           MR. SRINIVASA: You're indifferent

1 what electronics they deploy at the fiber. You  
2 just want to make sure that the backbone, the  
3 fiber optics that is already in the ground and  
4 whatever they are going to deploy in the future  
5 to the new customer continues to be the fiber  
6 optic to the curb. That's your position.

7 MR. DAVIS: Well, I do not want  
8 them to tear up the rights-of-way again in order  
9 to move copper technology which is, in my  
10 opinion, 50 years old back into the field so  
11 that we can accommodate a very narrow market  
12 segment which is simply resold -- (inaudible)

13 I don't know what the potential market  
14 in Richardson for such a thing is, but it seems  
15 unreasonable to expect the city or the citizens  
16 of Richardson to endure the enormous traffic  
17 tie-ups, the damage to our infrastructure and  
18 everything else that would be caused simply to  
19 permit one type of service to be resold within  
20 the City of Richardson.

21 It's nonsensical is what it is.

22 MR. SIEGEL: Just to make the  
23 record clear, no party here has suggested  
24 digging up fiber and replacing it with copper.

25 What they suggested is, when you're

1 laying new fiber, when you're digging up the  
2 roads anyway, putting something that is  
3 consistent with your requirements under the  
4 federal act to provide unbundled elements and  
5 not to continue to put something in that  
6 perpetuates whether it was a correct decision or  
7 not in 1994 an ability where the incumbent has  
8 discriminatory advantage.

9 MR. LEAHY: And, first of all,  
10 let's be clear for the record. The incumbent is  
11 Southwestern Bell Telephone Company.  
12 Southwestern Bell Telephone Company does not  
13 provide DSL services.

14 It has no advantage in this context.  
15 And as you've heard from the representative of  
16 ASI, he's not exactly crazy about his merger  
17 condition obligation to serve the current  
18 customers because of the costs involved.

19 MR. SIEGEL: Well, just to be  
20 clear, I empathize with ASI. Southwestern Bell,  
21 the incumbent, although they don't provide DSL  
22 services, is benefiting very well because they  
23 are making a huge profit off of ASI, because ASI  
24 is only receiving 39.95 and is paying  
25 Southwestern Bell Telephone, the incumbent, what

1 appears to be much more.

2 MR. BROWN: Well, I would take  
3 exception with that. My rates and my costs are  
4 averaged across wide geographic areas. So I can  
5 afford to serve 900 customers and perhaps not  
6 recover those costs because I made that up in  
7 margins in someplace else.

8 I think the solution here that  
9 Southwestern Bell has proposed is the proper  
10 solution. They are marching down the road to  
11 develop a broadband service that's going to be  
12 well thought out. There are going to be  
13 ordering methods that work the first time.

14 Once that is in place, then the  
15 unaffiliated CLECs and ASI have the same  
16 opportunity to market to those customers. We  
17 have a service that will work. They have  
18 committed to doing it in as short a period of  
19 time as possible.

20 That appears to me to be the correct  
21 solution.

22 MR. SRINIVASA: I think we have  
23 discussed, you know, all issues related to  
24 Richardson. Maybe we need to move on to the  
25 next set of issues. Before we do that, we want

1 to take a 10-minute break.

2 MS. GENTRY: Before we break, you  
3 would like some things from us. Can you give us  
4 a feel -- you wanted some recommendations.  
5 Would you like them in 10 days or 15 days? Give  
6 us a sense.

7 And can I also ask that when SBC  
8 responds to you that they put in their proposed  
9 or tentative time-line for this; could they also  
10 at some point give a commitment for what that  
11 price is going to be? Because they have alluded  
12 to the fact that they believe this solution will  
13 potentially cost more than the proposed Pronto  
14 pricing that's out there.

15 So if we could have a magnitude of 20  
16 percent more or 50 percent more, and if they  
17 don't have it now -- I understand they may not  
18 have it in 10 or 15 days -- can they give us a  
19 time frame? I'm looking at what the gentleman  
20 from Richardson has been saying.

21 I would like to be competitive there,  
22 and I have no idea -- right now I'd have to tell  
23 you I can never commit to going to Richardson.  
24 I have a collocation that now is almost useless  
25 to me, as is probably a half a dozen other



1 CLECs.

2           We could never tell you that we could  
3 be competitive in Richardson, because the  
4 solution right now for Pronto is prohibitively  
5 expensive. Most of us do not believe that we  
6 can be competitive with Pronto, let alone Pronto  
7 plus some margin -- plus some additional.

8           So you may only have -- the only person  
9 that will ever serve Richardson may only be ASI.  
10 So I need to have a sense. So if we could have  
11 something that starts framing this together over  
12 the next several weeks would be helpful.

13           MR. SRINIVASA: Okay. In your  
14 proposal, can you include the details that she  
15 just enumerated?

16           MR. LEAHY: Yeah. I just want to  
17 emphasize that Ms. Gentry acknowledged that we  
18 may not be able to come up with rates, given  
19 that we may not know specifically what the  
20 technical solution will be on the long-term  
21 basis.

22           But I acknowledge her request, and  
23 we'll endeavor to be responsive.

24           MR. SRINIVASA: Will you be able  
25 to file that within, say, the next 15 days?

1                   MR. LEAHY: I don't know. Maybe  
2 after lunch we can come back with a sense.

3                   MR. SRINIVASA: Okay. Please let  
4 us know. Let's take our luncheon recess and  
5 come back at 12:30.

6                   (Luncheon recess - 11:30 a.m.)

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1                   AFTERNOON SESSION  
2                   WEDNESDAY, JULY 26, 2000

3  
4                   MR. MASON: All right. We're back  
5 on the record. We had a lunch break, and we are  
6 now -- we have been asked to take one other  
7 small issue from last time out of turn. We will  
8 take up the technical publication in just a few  
9 minutes, but I understand that the  
10 representative from ASI -- is that correct?

11                  MR. BROWN: Yes, Mr. Maxwell, Tom  
12 Maxwell is here. And you had asked for some  
13 information on customer self-install, so what we  
14 thought would be appropriate is he will just  
15 walk you through a typical session of a customer  
16 self-install. Is that pretty much what you had  
17 in mind?

18                  MS. MALONE: That would be great.

19                  MR. BROWN: Okay. This is Tom  
20 Maxwell.

21                  MR. MAXWELL: I'm Tom Maxwell,  
22 SBC. And what I would like to show you today is  
23 the DSL self-install box that our customers  
24 would receive. The customer calls in. We need  
25 to go through some additional qualifying

1 questions, in particular, what operating systems  
2 are you using. Currently, the offer does  
3 support Windows 95 and 98 although we are  
4 aggressively expanding that to include as many  
5 operating systems as our customers will need.

6           The first thing the customer receives  
7 or sees when they open the box is what we call  
8 our DSL Installation Guide. This is about 20  
9 pages long, but it's really the result of  
10 extensive human factors testing in direct  
11 feedback from our customers. And what we've  
12 attempted to do and what we have been successful  
13 in doing is taking the customer all the way from  
14 the point of opening the box and verifying the  
15 contents all the way through, through the  
16 successful implementation of their equipment.

17           What the box contains is everything the  
18 customer will need to install their CPE for  
19 their DSL service. The very first thing the  
20 customer should do is remove the plastic bag,  
21 and inside the bag we have a series of what we  
22 call microfilters.

23           What these filters do and the whole  
24 logic behind self-install of DSL is the DSL and  
25 the voice signals no longer split outside the

1 home. There is no external splitter. What that  
2 means is the voice and the data co-mingle every  
3 jack inside the home. So the jack on which the  
4 DSL line is installed does not need a micro  
5 filter, but every other analog device, be it  
6 telephone, be it Caller ID box, be it a fax  
7 machine, requires a low-pass filter.

8           What this essentially does is you plug  
9 your telephone line into this end, this end into  
10 the actual jack. And what it does is it filters  
11 out the high frequency DSL signal. Periodically,  
12 if a customer does not have one of these, the  
13 high frequency signal can bleed into the lower  
14 band voice, and you can hear some high frequency  
15 noise on the phone, but this effectively removes  
16 that.

17           MR. SRINIVASA: What about for the  
18 wall mounted telephones? Do you have that?

19           MR. MAXWELL: Excellent segue.  
20 The customer gets five of these what we call  
21 in-line filters and one wall-mount filter. In  
22 addition, there is one small device that we call  
23 a two-in-one or a Y connector. This is in the  
24 instance where a customer desires to have an  
25 analog device resident on the same jack with

1 their DSL line. In essence what happens here is  
2 there are two inserts, one for the filtered  
3 analog device, one for the DSL. And then this  
4 plugs into the wall.

5           Once the customer completes that, the  
6 wires inside the home are now set for the DSL  
7 installation.

8           MR. DRAKE: Question. Sir,  
9 William Drake, WorldCom. Is this for G light?  
10 You may microfilters, so that's not regular  
11 ADSL.

12           MR. MAXWELL: It's not G light.  
13 The equipment is G light and full rate DSL  
14 compatible, although what we offer is full rate.

15           MR. DRAKE: Thank you.

16           MR. MAXWELL: Probably the most  
17 important piece of equipment that's inside the  
18 customer's CPE is the modem itself. The model  
19 that I brought along today is what we call our  
20 Ethernet Solution. You have both Ethernet as  
21 well as a USB Solution. This particular model  
22 is from Efficient Networks, and what the  
23 customer has to do is place this modem  
24 essentially beside their PC. It comes with an  
25 Ethernet cord and with AC power.

1           The customer places that alongside  
2 their PC, and the one truly involved step for  
3 the Ethernet solution is the installation of an  
4 internal NIC or network interface card. What  
5 the customer will need to do -- and this is  
6 where our guide is excruciatingly clear in  
7 walking the customer through -- is the removal  
8 of the shell of their PC, finding an open PCI  
9 slot, and we provide as many graphics as  
10 possible to show them what an open PCI slot  
11 is -- the installation of this or the insertion  
12 in the open PCI slot, close up the PC.

13           Once that's done, the Ethernet cord  
14 runs from the PC into their modem. The AC power  
15 runs from the modem into the wall. They plug in  
16 plain old telephone cord in the line section of  
17 their modem into the analog jack or into the  
18 jack in the wall. They simply have to turn on  
19 their PC. The PC recognizes that a device has  
20 been attached, and their installation for their  
21 equipment is now complete.

22           What that means in terms of the guide  
23 is we have taken this process and culled it down  
24 to seven steps. On the seventh step, once a  
25 customer completes that, we tell them they

1 should now focus on the client server software,  
2 the PPPOE or the protocol and drivers that will  
3 be sent to them under separate cover from their  
4 chosen ISP.

5 MR. SRINIVASA: Now, the Ethernet,  
6 if someone has links or 3COM, they don't have  
7 (inaudible) Internet card already there,  
8 interface with that?

9 MR. MAXWELL: What we're doing,  
10 we're running this in particular with testing  
11 with MAC. Certain PCs do come with NIC cards  
12 already installed. And we are developing the  
13 requisite tools that will tell the customer if  
14 they have a network interface card, as well as  
15 being able to detect it potentially themselves.

16 If they do not, then we can -- at the  
17 time of sale, if we know that, we can send them  
18 what is referred to as a NICless package. If  
19 they're not sure, we'll send them a full  
20 complement of equipment, and, if they do not  
21 need the NIC, then they simply will have a spare  
22 one at that point.

23 MR. SRINIVASA: Okay. So you are  
24 looking -- any standard Ethernet card  
25 interfacing into that box which goes into -- is



1 that the box which works the Ethernet into

2 ADSL --

3 MR. MAXWELL: The network  
4 interface card?

5 MR. SRINIVASA: The box, the black  
6 box that you have --

7 MR. MAXWELL: This modem?

8 MR. SRINIVASA: Yeah, modem. That  
9 is the one which converts the Ethernet package  
10 into the ADSL format and sends it out?

11 MR. MAXWELL: Yes, and by our  
12 Ethernet connection to the PC.

13 MR. SRINIVASA: To the PC. Okay.

14 MR. DRAKE: William Drake,  
15 WorldCom. Who is the manufacturer of the modem?

16 MR. MAXWELL: The modem? We  
17 currently sell two. This is one of our Ethernet  
18 Solutions by Efficient Networks. We also have a  
19 Westel Ethernet Solution.

20 MR. BROWN: Does that answer your  
21 questions?

22 MS. MALONE: Great. Thank you  
23 very much.

24 MR. BROWN: Thanks, Tom.

25 MR. DRAKE: William Drake,